

REMARKS

With the present Amendment, claims 51 through 60 have been cancelled. Claims 1 through 38 were previously cancelled. New claims 61-74 are added and are drawn to a carding machine incorporating the grinding apparatus that is the subject of claims 39 through 50. Accordingly, claims 39 through 50 and 61-74 are pending.

Claims 39, 42, and 46 are amended herein to correct the informalities noted in paragraph 5 of the Office Action.

Claims 41, 42, and 50 were indicated as allowable if rewritten to overcome the respective rejections under 35 U.S.C. § 112, second paragraph. Claim 41 is amended herein to be placed in independent form and to correct the § 112 formality. Accordingly, claim 41 is allowable. Claim 42 depends from claim 41 and is thus also allowable. Claim 50 has also been amended to be placed in independent form and to correct the § 112 formality, and is thus also allowable.

Applicants respectfully submit that all of the remaining claims are allowable as discussed below.

Claims 39 through 40 and 43 stand rejected as obvious in view of Sykes (GB 4320). Claims 45 through 49 stand rejected under § 103(a) in view of the combination of Sykes and DeMuth '154. Applicants respectfully submit that all of the claims define over the cited references.

Claim 39 is drawn to a grinding apparatus having a first set of grinding elements mounted on a support so as to extend outwardly therefrom. The first set of grinding elements have a length and a size so as to penetrate between the individual clothing elements of a textile machine in order to grind the lateral flank portions of the respective

clothing elements. The apparatus includes a second set of grinding elements that extend from the support at a lesser radial distance than the first set of grinding elements. The second set of grinding elements are disposed and have a size so as not to extend between the clothing elements, but to contact and grind the front face sides of the clothing elements. This unique arrangement of a first and a second set of grinding elements extending from a common support is not obvious in view of any combination of cited references.

The primary reference applied in the obviousness rejection is the Sykes GB 4320 reference. This reference discloses a grinding apparatus consisting of a plurality of beveled or angled discs. The discs are composed of solid of emery, or may be made by coating metal or substances with emery. Each individual disc is attached in an oblique or angular position relative to a shaft that defines the rotational axis of each disc. The oblique or angular orientation of the individual disc with respect to the shaft defines the primary benefit and importance of the invention according to the GB reference in that such angular orientation imparts a to-and-fro motion to each individual disc as it rotates. In this way, it is alleged that each disc serves to grind both sides, back, and point of each individual card tooth as it moves in its reciprocating back-and-forth motion. The obviousness rejection is based on the premise that it would have been obvious to one of ordinary skill in the art to make the abrasive ridges and valleys of the discs as separate elements "in order to allow the elements to be individually replaced when worn or damaged."

The individual valleys and ridges defined in the device according to Sykes are already defined by separate disc elements. Each disc has a ridge and angled sides.

The angled sides of adjacent discs define a “valley.” Reference is made to Fig. 6 showing an individual disc mounted on the shaft at the desired angular orientation. If an individual disc is damaged or worn, it can be replaced with another disc. However, to further segment the discs into a multitude of individual replaceable components would be extremely difficult, particularly in view of the requirement that the individual disc be attached to the shaft at an oblique angular orientation, and would serve no beneficial purpose.

It should also be considered that the apparatus according to Sykes is fundamentally different from the claimed invention and, absent the present disclosure, there is simply no motivation or suggestion to one skilled in the art to reconfigure the device of Sykes into an apparatus having a first set of grinding elements with a length to penetrate between the clothing elements, and a completely different second set of grinding elements having a length so as not extend between the clothing elements. As discussed throughout the specification, the unique configuration of a first set of grinding elements that only grinds the lateral flank portions of the clothing elements, and a second set of grinding elements that does not extend between the clothing elements but only contacts the front faces of the clothing elements, provides a unique and beneficial grinding operation. This operation is not possible with the type of reciprocating to-and-fro motion that is the desired feature of the grinding apparatus according to Sykes. For example, referring to Fig. 6 of Sykes, the reciprocating path of a single individual grinding element is shown. The ridge reciprocates between the dashed line position and the solid line position and, thus, can only extend between individual clothing elements. The disc is a hard, solid emery material and cannot sweep across the front

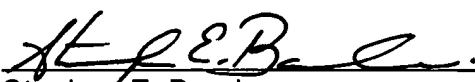
faces of the clothing elements without damaging the elements. There is no structure in the Sykes apparatus that reasonably provides the same function and benefit of a second set of grinding elements disposed and having a size so as not to extend between the clothing elements, but to only contact the front faces of the clothing elements, as particularly seen, for example, in Fig. 13a of the present application.

Accordingly, for at least the reasons set forth above, applicants respectfully submit that independent claim 39 patentably distinguishes over the art of record, particularly the GB 4320 reference. Applicants respectfully submit that independent claim 39 patentably distinguishes over the art of record, particularly the GB 4320 reference to Sykes and is allowable. The remaining claims depend from claim 39 and are allowable for at least the reasons claim 39 is allowable.

With the present Amendment, applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance. Favorable action thereon is respectfully requested. The Examiner is encouraged to contact the undersigned at his convenience should he have any questions regarding this matter or require any additional information.

Respectfully submitted,

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